

REMARKS

The Examiner's Office Action of February 25, 2005 has been received and its contents reviewed. Applicants would like to thank the Examiner for the consideration given to the above-identified application.

By the above actions, claims 12-20 have been amended. Claims 2-4 were previously cancelled. Accordingly, claims 1 and 5-20 are pending for consideration, of which claims 1 and 20 are independent. In view of these actions and the following remarks, reconsideration of this application is now requested.

Referring now to the detailed Office Action, claims 12-17 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner asserted that claims 12-17 is classified as product-by-process claim and that a single claim, which claims both an apparatus and the method steps using the apparatus, is indefinite under §112, second paragraph. In response, Applicants note that claims 12-17 are written in the form of not a product-by-process form but a method claim. Further, Applicants respectfully direct the Examiner to MPEP 2173.05(f), which states:

A claim which makes reference to a preceding claim to define a limitation is an acceptable claim construction which should not necessarily be rejected as improper or confusing under 35 U.S.C. 112, second paragraph. For example, claims which read: "The product produced by the method of claim 1." or "A method of producing ethanol comprising contacting amylose with the culture of claim 1 under the following conditions" are not indefinite under 35 U.S.C. 112, second paragraph, merely because of the reference to another claim. See also Ex parte Porter, 25 USPQ2d 1144 (Bd. Pat. App. & Inter. 1992) where reference to "the nozzle of claim 7" in a method claim was held to comply with 35 U.S.C. 112, second paragraph. However, where the format of making reference to limitations recited in another claim results in confusion, then a rejection would be proper under 35 U.S.C. 112, second paragraph.

According to MPEP 2173.05(f), claim 12 of the present application is in compliance with 35 U.S.C. §112, second paragraph.

In the §112, second paragraph, rejection, the Examiner appears to rely on MPEP 2173.05(p), which states:

A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph.

In Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), a claim directed to an automatic transmission workstand and the method steps of using it was held to be ambiguous and properly rejected under 35 U.S.C. 112, second paragraph. Such claims should also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only.

However, Applicants respectfully submit that claim 12 further defines features of device claim 1 by describing how the claimed features are made not to a method of how to use the device of claim 1. Hence, MPEP 2173(p), which references *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), would be improper, if cited.

Claims 1, 5, 6, 8-12, 15 and 17 stand rejected under 35 U.S.C. §103(a) as unpatentable over Ramshaw et al. (U.S. Patent No. 6,059,024 – hereafter Ramshaw) in view of Takabayashi et al. (U.S. Patent No. 5,262,227 – hereafter Takabayashi). Further, claim 7 stands rejected under 35 U.S.C. §103(a) as unpatentable over Ramshaw in view of Takabayashi, and further in view of Yao et al. (U.S. Patent No. 2003/0129379 – hereafter Yao). Finally, claims 13, 14 and 16 stand rejected under 35 U.S.C. §103(a) as unpatentable over Ramshaw in view of Takabayashi, and further in view of Philpott et al. (U.S. Patent Publication No. 2003/0213580 – hereafter Philpott). These rejections are respectfully traversed at least for the reasons provided below.

Initially, Applicants note that the Examiner did not make a detail rejection of claims 18-20. Hence, the Office Action is incomplete. Accordingly, Applicants respectfully request that the next Office Action to not be a final Office Action and that the Examiner provide a detailed rejection of claims 18-20.

In response to the rejection of claims 1, 5, 6, 8-12, 15 and 17 over Ramshaw and Takabayashi, Applicants have amended the claims, as shown above, to further distinguish the present invention of claims 1 and 20 over the cited prior art references. Specifically, Applicants have amended independent claims 1 and 20, as shown above, to further specify that the flexible thermoplastic polymer films is a plane. Support for this amended feature can be found at least in, e.g., Fig. 1. Consequently, claims 12-17 have been amended to reflect the aforementioned amendment to claim 1.

Further, Applicants have amended independent claim 20 to replace the conjunction "and", which is found between "2,3,3',4'-biphenyltetracarboxylic dianhydride" and "4,4' -

oxydiphthalic dianhydride", with "or". Applicants note that the flexible thermoplastic polyimide film I (as set forth in the specification on page 8, lines 15-27) is prepared employing 2,3,3',4'-biphenyltetracarboxylic dianhydride alone as the tetracarboxylic acid component.

In the §103(a) rejection of claims 1, 5, 6, 8-12 and 17 over Ramshaw and Takabayashi, the Examiner alleged that Ramshaw discloses a polymer film heat exchange comprising:

- a flexible heat change including a pair of thermoplastic polymer films;
- a heat conductive film on the surface, ...;
- fusing together thermoplastic polymer films to form a conduit pattern between the films;
- the flexible heat exchanger has a thickness in the range of 5 μ m to 20 mm.

However, Applicants respectfully assert that the Examiner has misinterpreted Ramshaw and that Ramshaw does not teach that the thermoplastic polymer films are fused together to form a conduit pattern between the films.

Applicants note that Ramshaw discloses the following descriptions:

"... a bilayer is sealed in known manner at its periphery to contain the second fluid in suitable manner" (see col. 3, lines 35-37);

"... the sealing thereof preferably two films are molded to obtain the desired corrugation to obtain the desired configuration and simultaneously or otherwise are sealed and are formed to obtain the desired configuration ..." (see col. 4, lines 44-47);

"It is conveniently manufactured by bonding only two film layers together, rather than multiple layers in a matrix" (see col. 5, lines 21-23);

"It is proposed to generate this area by bonding two corrugated strips 10 cm wide and 1 m long as their periphery as shown in FIG. 1" (see col. 5, lines 41-44); and

"11. A process for the preparation of a bilayer of polymer film ..., and sealing both of said polymer films" (see claim 11).

As shown in the above-mentioned exemplary quotes from Ramshaw, neither "fusing" nor "fused" is taught, disclosed or suggested.

Further, Applicants respectfully submit that the thermoplastic films employed in Ramshaw are not plane films but corrugated films, as shown in Fig. 1 of Ramshaw. To

further distinguish the presently claimed invention over Ramshaw, Applicants have amended the pending claims to recite a pair of plane flexible thermoplastic polymer films.

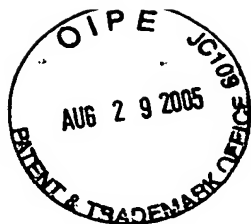
In the §103(a) rejection of claims 1, 5, 6, 8-12 and 17, the Examiner admitted that Ramshaw is silent with respect to the use of thermoplastic polyimide film (i.e., composite film) comprising a substrate film and a thermoplastic surface film. To cure the deficiency of Ramshaw, the Examiner then relied on Takabayashi as teaching a thermoplastic polyimide film comprising a substrate film and a thermoplastic surface film fixed to a heat conductive film. The thermoplastic surface film of the composite film is fixed to heat conductive film, which is a metal film, such as a copper film. However, Applicants respectfully assert that Takabayashi does not teach the thermoplastic surface film of the composite film being fixed to each other and forming a sealed structure.

The requirements for establishing a *prima facie* case of obviousness, as detailed in MPEP § 2143 - 2143.03 (pages 2100-122 - 2100-136), are: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine the teachings; second, there must be a reasonable expectation of success; and, finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. As Takabayashi does not teach disclose or suggest a pair of flexible thermoplastic polymer films, each of which comprises an aromatic polyimide substrate film showing no glass transition temperature or a glass transition temperature of 340°C or higher and a thermoplastic aromatic polyimide surface film showing a glass transition temperature in the range of 190 to 300°C fixed to the substrate film in such manner that the surface films face each other, Takabayashi cannot be combined with Ramshaw and cannot cure the deficiency of Ramshaw.

With respect to the §103(a) rejection of the dependent claims, Applicants respectfully assert that the amendment and arguments set forth above in relation to independent claim 1 are also applicable. Moreover, Philpott and Yao do not teach, disclose or suggest the above-discussed features that are deficient in Ramshaw and Takabayashi.

Claims 18-19 have been amended to improve the claim language.

In the interest of keeping prosecution history compact, and as the response set forth above is deemed sufficient to overcome all the rejections, Applicants will not address each and every rejection of the pending dependent claims. Applicants reserve the right to do so in



the future, as necessary.

In view of the amendments and arguments set forth above, Applicants respectfully request reconsideration and withdrawal of all the pending rejections.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise, which could be eliminated through discussions with Applicant's representative, then the Examiner is invited to contact the undersigned by telephone in order that the further prosecution of this application can thereby be expedited.

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Respectfully submitted,

Luan C. Do
Registration No. 38,434

JLC/LCD

NIXON PEABODY LLP
Suite 900, 401 9th Street, N.W.
Washington, D.C. 20004-2128
(202) 585-8000